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Docket No.: 2410-0184P

Application No. 10/790,069
Amendment filed on December 14, 2006
Reply to Office Action of September 15, 2006

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A purification process for manufacturing a ~~high~~ highly pure acarbose from an acarbose-containing fermentation broth, comprising the steps of:

uses using alcohol for precipitation of a concentrate from the fermentation broth;

mixing alcohol with the concentrate to form a sediment;

dissolving the sediment using distilled water to form an initial impure acarbose solution;

and separation, using a strongly strong cation exchange chromatography and an immobilized enzyme affinity chromatography for purification and purifying an of the acarbose-containing fermentation broth to get a high pure acarbose.

2. (Currently Amended) The purification process of claim 1, wherein the ~~strongly~~ strong cation exchange chromatography uses a styrene divinylbenzene copolymer without methoxymethylmethacrylamide to be a resin matrix.

3. (Currently Amended) The purification process of claim 1, wherein the ~~enzyme of the~~ immobilized enzyme affinity chromatography has an enzyme which uses α -amyloglucosidase(α -glucoamylase).

4. (Currently Amended) The purification process of claim 1, wherein the ~~strongly~~ strong cation exchange chromatography uses a cation exchange resin containing 20-200 mg sugars/mL ~~resin~~.

5. (Currently Amended) The purification process of claim 2, wherein, after strong cation exchange chromatography, further comprising a step after the strongly cation exchange chromatography uses a solvent, a 0~2.0N ammonia solution is used as a solvent; to manufacture a high pure highly pure acarbose.

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6. (Currently Amended) The purification process as claim 3, wherein, after the immobilized enzyme affinity chromatography, further comprising a step after the immobilized enzyme affinity chromatography uses a solvent, 55~75°C distilled water, is used as a solvent to manufacture a high-pure highly pure acarbose.

7. (Currently Amended) The purification process as claim 1, wherein the purity of high-pure highly pure acarbose is large larger than 95% (wt/wt) and used to treat suitable for use in treating diabetes.

8-18. (Cancelled)

19. (Currently Amended) A purification process for manufacturing a high-pure highly pure acarbose, comprising the steps of:

solving dissolving a an acarbose powder of acarbose having a , which the purity is of 83%~87%, by with distilled water, to be form a solution;

adjusting the pH value of the solution;

passing the solution through an α -amyloglucosidase column;

washing the α -amyloglucosidase column by using a times-volume of deionied-deionized water equal to twice volume as the volume of the α -amyloglucosidase column;

eluting an acarbose fragments from the α -amyloglucosidase column by using distilled water;

concentrating the acarbose-containing fractions-fragments to be a volume of impure acarbose by a ceneenteration-concentrating system; and

using alcohol for precipitating the impure acarbose to get-obtain a high-pure highly pure acarbose.

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20. (Currently Amended) The purification process of claim 20, wherein the flow velocity of passing through the α -amyloglucosidase column is 1.5 mL/min.

21. (Currently Amended) The purification process of claim 20, wherein the step of washing the α -amyloglucosidase column step ~~uses two times a volume of~~ deionized water volume ~~as the equal to twice the~~ volume of the α -amyloglucosidase column.

22. (Currently Amended) The purification process of claim 20, wherein washing the α -amyloglucosidase column ~~by with~~ deionized water ~~step~~ changes the flow velocity of passing through the α -amyloglucosidase column ~~being to 210nm till until~~ the absorbance of the α -amyloglucosidase is steady.

23. (Currently Amended) The purification process of claim 20, wherein ~~solving the~~ step of dissolving the an impure acarbose powder from the α -amyloglucosidase column ~~by uses~~ 65°C distilled water, ~~65°C~~.

24. (Currently Amended) The purification process of claim 20, wherein the purity of the ~~high pure~~ highly pure acarbose is up 95%.